09-820095
#9

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:
WAYNE W. MONTGOMERY
CELERA GENOMICS
45 WEST GUDE DRIVE C2-4#21
ROCKVILLE, MD 20850

PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT OR THE DECLARATION

(PCT Rule 44.1)

	Date of Mailing (*day/month/year*) 19 DEC 2002
Applicant's or agent's file reference CL001202PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US02/09545	International filing date (*day/month/year*) 28 March 2002 (28.03.2002)
Applicant PE CORPORATION	

1. ☒ The applicant is hereby notified that the international search report has been established and is transmitted herewith.

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

   When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

   Where? Directly to the International Bureau of WIPO, 34, chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: (41-22) 740.14.35

   For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

3. ☐ **With regard to the protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   Shortly after **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90 *bis*.1 and 90 *bis*.3, respectively, before the completion of the technical preparations for international publication.

   Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

   In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

   See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the ISA/US Commissioner for Patents Box PCT Washington, D.C. 20231	Authorized officer Brian Whiteman
Facsimile No. (703)305-3230	Telephone No. 703 308-0196

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JAN - 3 2003
CELERA GENOMICS

Form PCT/ISA/220 (April 2002) *(See notes on accompanying sheet)*

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference CL001202PCT	**FOR FURTHER ACTION**	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
International application No. PCT/US02/09545	International filing date (*day/month/year*) 28 March 2002 (28.03.2002)	(Earliest) Priority Date (*day/month/year*) 29 March 2001 (29.03.2001)
Applicant PE CORPORATION		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 6 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the Report**
   a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
   ☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
   b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:
   ☐ contained in the international application in written form.
   ☐ filed together with the international application in computer readable form.
   ☒ furnished subsequently to this Authority in written form.
   ☒ furnished subsequently to this Authority in computer readable form.
   ☒ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
   ☒ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.
2. ☐ **Certain claims were found unsearchable** (See Box I).
3. ☒ **Unity of invention is lacking** (See Box II).
4. With regard to the **title**,
   ☒ the text is approved as submitted by the applicant.
   ☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,
   ☒ the text is approved as submitted by the applicant.
   ☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No. ____
   ☐ as suggested by the applicant. ☒ None of the figures
   ☐ because the applicant failed to suggest a figure.
   ☐ because this figure better characterizes the invention.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US02/09545

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claim Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claim Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claim Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:
Please See Continuation Sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.: 1, 2, 4, 5, 6, 8-13, 20-23 (SEQ ID NO: 1 and 2)

Remark on Protest
☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US02/09545

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C07H 21/02, 21/04; C12N 15/00, 15/09, 15/63, 15/70, 15/74; A01N 63/00; A61K 48/00
US CL : 536/23.1; 424/93.2; 435/320.1

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 536/23.1; 424/93.2; 435/320.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	WO 98/42835 A1 (OTSUKA PHARMACEUTICAL CO., LTD.) 01 October 1998 (01.10.1998), see SEQ ID NO: 1.	1, 2, 4, 5, 8-11, 20 --- 6, 12, 13
X --- Y	URANO et al. Cloning of P2XM, a Novel Human P2X Gene Regulated by p53. Cancer Research. 01 August 1997, Vol. 57, pages 3281-3287, especially page 3283.	1, 2, 4, 5, 8, 9, 10, 11, 20-23 --- 6, 12, 13
X, P --- Y,P	US 6,214,581 B1 (LYNCH et al) 10 April 2001(10.04.2001), see whole document, especially Figure 9.	1, 2, 4, 5, 8-11, 20-23 --- 6

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
03 October 2002 (03.10.2002)	19 DEC 2002
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703)305-3230	Authorized officer Brian Whiteman Telephone No. 703 308-0196

Form PCT/ISA/210 (second sheet) (July 1998)

BOX II. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING

This application contains the following inventions or groups of inventions, which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I, claim(s) 1-2, 4-6, 8-13, and 20-23, drawn to an isolated peptide consisting of amino acid sequence selected from the group consisting of: (a) an amino acid sequence shown in SEQ ID NO: 2; (b) an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 1; an isolated nucleic acid molecule shown in SEQ ID NO: 2; a method for producing SEQ ID NO: 2; a method for detecting the presence of SEQ ID NO: 2 or a fragment thereof in a sample.

Group II, claim(s) 1(b), (c); 2(b), (c); 4(b), (c), (e); 5(b), (c), (e); 6, 8-13, and 20-23 drawn to an isolated peptide consisting of amino acid sequence selected from the group consisting of: an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 3; a method for producing SEQ ID NO: 3; a method for detecting the presence of SEQ ID NO: 3 in a sample.

Group III, claim(s) 3, drawn to an antibody that binds to a peptide selected from the group consisting of: (a) an amino acid sequence shown in SEQ ID NO: 2; (b) an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 1.

Group IV, claim 3, drawn to an antibody selected from the group consisting of: an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 3.

Group V, claim 7, drawn to a transgenic animal comprising a nucleic acid molecule of claim 5.

Group VI, claims 14 and 15, drawn to a method for identifying a modulator of a peptide of claim 2 selected from the group consisting of: (a) an amino acid sequence shown in SEQ ID NO: 2; (b) an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 1.

Group VII, claims 14 and 15, drawn to a method for identifying a modulator of a peptide of claim 2 selected from the group consisting of: an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 3.

Group VIII, claim 16, drawn to a method for identifying an agent that binds to the peptide of claim 2 selected from the group consisting of: (a) an amino acid sequence shown in SEQ ID NO: 2; (b) an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 1.

Group IX, claim 16, drawn to a method for identifying an agent that binds to the peptide of claim 2 selected from the group consisting of: an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 3.

Group X, claims 17 and 18, drawn to a method for treating a disease mediated by a human proteases, said method comprising administering an agent identified by the method of claim. 16.

INTERNATIONAL SEARCH REPORT

Group XI, claim 19, drawn to a method for identifying a modulator of the expression of a peptide of claim 2 selected from the group consisting of: (a) an amino acid sequence shown in SEQ ID NO: 2; (b) an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 1.

Group XII, claim 19, drawn to a method for identifying a modulator of the expression of a peptide of claim 2 selected from the group consisting of: an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 3.

The inventions listed as Groups I-XII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The special technical feature of Group I is considered to be an isolated peptide as shown in SEQ ID NO: 2.
The special technical feature of Group II is considered to be an isolated peptide as shown an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 3
The special technical feature of Group III is considered to be an antibody that binds to SEQ ID NO: 2.
The special technical feature of Group IV is considered to be an antibody that binds to an amino acid of the nucleotide sequence shown in SEQ ID NO: 3.
The special technical feature of Group V is considered to be a transgenic animal.
The special technical feature of Group VI is considered to be a method for identifying a modulator of a peptide of claim 2 selected from the group consisting of: (a) an amino acid sequence shown in SEQ ID NO: 2; (b) an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 1.
The special technical feature of Group VII is considered to be a method for identifying a modulator of a peptide of claim 2 selected from the group consisting of: an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 3.
The special technical feature of Group VIII is considered to be a method for identifying an agent that binds to the peptide of claim 2 selected from the group consisting of: (a) an amino acid sequence shown in SEQ ID NO: 2; (b) an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 1.
The special technical feature of Group IX is considered to be a method for identifying an agent that binds to the peptide of claim 2 selected from the group consisting of: an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 3.
The special technical feature of Group X is considered to be a method for treating a disease by a human lipase protein, said method comprising administering an agent identified by the method of claim. 16.
The special technical feature of Group XI is considered to be a method for identifying a modulator of the expression of a peptide of claim 2 selected from the group consisting of: (a) an amino acid sequence shown in SEQ ID NO: 2; (b) an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 1.
The special technical feature of Group XII is considered to be a method for identifying a modulator of the expression of a peptide of claim 2 selected from the group consisting of: an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 3.

Accordingly, Group I-XII are not so linked by the same corresponding special technical feature as to form a general inventive concept.

Continuation of B. FIELDS SEARCHED Item 3:
WEST 2.1, STN
search terms: G protein coupled receptor, GPCR, P2X, G protein

CHAPTER I
PCT TELEPHONE MEMORANDUM
FOR
LACK OF UNITY OF INVENTION

PCT No.: PCT/US02/09545

Examiner: Brian Whiteman

Attorney spoken to: Lin Sun-Hoffman

Date of call: 13 May 2002

☐ Amount of payment approved:

☐ Deposit account number to be charged:

☐ Attorney elected to pay for ALL additional inventions

☐ Attorney elected to pay only for the additional inventions covered by

☐ Group(s):

-- encompassing –

☐ Claim(s):

☒ Attorney elected NOT to pay for any additional inventions, therefore, only the first claimed invention (Group I) covered by Claim(s) 1-2, 4-6, 8-13, 20-23 (SEQ ID NO: 1 and 2) has been searched.

☒ Attorney was orally advised that there is no right to protest for any group not paid for.

☒ Attorney was orally advised that any protest must be filed no later than 15 days from the mailing of the Search Report (PCT/ISA/210).

Time Limit For Filing A Protest

Applicant is hereby given 15 days from the mailing date of this Search Report in which to file a protest of the holding of lack of unity of invention. In accordance with PCT Rule 40.2, applicant may protest the holding of lack of unity only with respect to the group(s) paid for.

Detailed Reasons For Holding Lack of Unity of Invention:
Please See Continuation Sheet

Note: A copy of this form must be attached to the Search Report.

ATTACHMENT TO CHAPTER I PCT TELEPHONE MEMORANDUM FOR LACK OF UNITY OF INVENTION

Continuation of Detailed Reasons For Holding Lack of Unity of Invention:

This application contains the following inventions or groups of inventions, which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I, claim(s) 1-2, 4-6, 8-13, and 20-23, drawn to an isolated peptide consisting of amino acid sequence selected from the group consisting of: (a) an amino acid sequence shown in SEQ ID NO: 2; (b) an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 1; an isolated nucleic acid molecule shown in SEQ ID NO: 2; a method for producing SEQ ID NO: 2; a method for detecting the presence of SEQ ID NO: 2 or a fragment thereof in a sample.

Group II, claim(s) 1(b), (c); 2(b), (c); 4(b), (c), (e); 5(b), (c), (e); 6, 8-13, and 20-23 drawn to an isolated peptide consisting of amino acid sequence selected from the group consisting of: an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 3; a method for producing SEQ ID NO: 3; a method for detecting the presence of SEQ ID NO: 3 in a sample.

Group III, claim(s) 3, drawn to an antibody that binds to a peptide selected from the group consisting of: (a) an amino acid sequence shown in SEQ ID NO: 2; (b) an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 1.

Group IV, claim 3, drawn to an antibody selected from the group consisting of: an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 3.

Group V, claim 7, drawn to a transgenic animal comprising a nucleic acid molecule of claim 5.

Group VI, claims 14 and 15, drawn to a method for identifying a modulator of a peptide of claim 2 selected from the group consisting of: (a) an amino acid sequence shown in SEQ ID NO: 2; (b) an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 1.

Group VII, claims 14 and 15, drawn to a method for identifying a modulator of a peptide of claim 2 selected from the group consisting of: an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 3.

Group VIII, claim 16, drawn to a method for identifying an agent that binds to the peptide of claim 2 selected from the group consisting of: (a) an amino acid sequence shown in SEQ ID NO: 2; (b) an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 1.

Group IX, claim 16, drawn to a method for identifying an agent that binds to the peptide of claim 2 selected from the group consisting of: an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 3.

Note: A copy of this form must be attached to the Search Report.

Group X, claims 17 and 18, drawn to a method for treating a disease mediated by a human proteases, said method comprising administering an agent identified by the method of claim. 16.

Group XI, claim 19, drawn to a method for identifying a modulator of the expression of a peptide of claim 2 selected from the group consisting of: (a) an amino acid sequence shown in SEQ ID NO: 2; (b) an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 1.

Group XII, claim 19, drawn to a method for identifying a modulator of the expression of a peptide of claim 2 selected from the group consisting of: an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 3.

The inventions listed as Groups I-XII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The special technical feature of Group I is considered to be an isolated peptide as shown in SEQ ID NO: 2.
The special technical feature of Group II is considered to be an isolated peptide as shown an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 3
The special technical feature of Group III is considered to be an antibody that binds to SEQ ID NO: 2.
The special technical feature of Group IV is considered to be an antibody that binds to an amino acid of the nucleotide sequence shown in SEQ ID NO: 3.
The special technical feature of Group V is considered to be a transgenic animal.
The special technical feature of Group VI is considered to be a method for identifying a modulator of a peptide of claim 2 selected from the group consisting of: (a) an amino acid sequence shown in SEQ ID NO: 2; (b) an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 1.
The special technical feature of Group VII is considered to be a method for identifying a modulator of a peptide of claim 2 selected from the group consisting of: an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 3.
The special technical feature of Group VIII is considered to be a method for identifying an agent that binds to the peptide of claim 2 selected from the group consisting of: (a) an amino acid sequence shown in SEQ ID NO: 2; (b) an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 1.
The special technical feature of Group IX is considered to be a method for identifying an agent that binds to the peptide of claim 2 selected from the group consisting of: an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 3.
The special technical feature of Group X is considered to be a method for treating a disease by a human lipase protein, said method comprising administering an agent identified by the method of claim. 16.
The special technical feature of Group XI is considered to be a method for identifying a modulator of the expression of a peptide of claim 2 selected from the group consisting of: (a) an amino acid sequence shown in SEQ ID NO: 2; (b) an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 1.
The special technical feature of Group XII is considered to be a method for identifying a modulator of the expression of a peptide of claim 2 selected from the group consisting of: an amino acid sequence of an allelic variant or an ortholog of amino acid shown in SEQ ID NO: 2, wherein said ortholog or variant is encoded by a nucleic acid molecule that hybridizes under conditions to the opposite strand of a nucleic acid molecule shown in SEQ ID NO: 3.

Accordingly, Group I-XII are not so linked by the same corresponding special technical feature as to form a general inventive concept.

Note: A copy of this form must be attached to the Search Report.